

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of April 14, 2011 is respectfully requested.

By this Amendment, claim 1 has been amended. Thus, claims 1 and 13 are currently pending in the application. No new matter has been added by these amendments.

On pages 2-3 of the Office Action, the Examiner rejected claims 1 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Sugimoto et al. (JP 2002-008524) in view of Fujitani et al. (WO 02102732, using US 2004/0232839 as a translation). For the reasons discussed below, it is respectfully submitted that the present claims are clearly patentable over the prior art of record.

Independent claim 1 recites a plasma display panel (PDP) comprising a front panel including a display electrode, a dielectric layer and a protective layer sequentially formed on a first glass substrate, and a back panel including an address electrode, a base dielectric layer, a barrier rib and a phosphor layer sequentially formed on a second glass substrate, with the front panel and the back panel being disposed so as to confront each other and being sealed at the outer walls so as to form an inner space between the protective layer of the front panel and the phosphor layer, barrier rib and base dielectric layer of the back panel.

The plasma display panel of claim 1 also includes *a first catalyst and a second catalyst provided on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space and react with a hydrocarbon existing in the inner space*. Further, claim 1 recites that *the first catalyst is at least one of a catalyst which accelerates oxidization of the hydrocarbon* and is selected from the group consisting of Pd, Pt, Rh, Co₃O₄, PdO, Cr₂O₃, Mn₂O₃, CoO, and NiO, and that *the second catalyst accelerates decomposition of the hydrocarbon and consists of Co, Ti or Ni*. Claim 1 also recites that the barrier rib and the phosphor layer are formed on the base dielectric layer.

Sugimoto discloses a plasma display panel which, as shown in Fig. 2, includes a back panel 12, a front panel 14, ribs 16 and a phosphor layer 24. Further, Sugimoto discloses that the ribs 16 are formed by baking a rib-precursor compact obtained by hardening a light-sensitive glass-ceramic paste. In this regard, Sugimoto discloses that the light-sensitive paste should preferably include an oxidation catalyst in order to reduce the temperature required for burning off the binder component when forming the rib.

On page 3 of the Office Action, the Examiner notes that Sugimoto discloses CoO as an oxidation catalyst, and that the oxidation catalyst of Sugimoto corresponds to the first catalyst of claim 1. Further, the Examiner indicates that Sugimoto does not disclose *a second catalyst which accelerates decomposition of the hydrocarbon and consists of Co, Ti or Ni*, as required by claim 1. In this regard, the Examiner cites Fujitani as disclosing a catalyst (Ni) which accelerates decomposition of a hydrocarbon and which is incorporated into a dielectric layer, and asserts that it would have been obvious to one of ordinary skill in the art to incorporate the catalyst of Fujitani into the PDP of Sugimoto.

However, it is respectfully submitted that the combination of Sugimoto and Fujitani does not disclose or suggest a PDP in which *a first catalyst and a second catalyst are provided on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space and react with a hydrocarbon existing in the inner space*, as required by independent claim 1.

In particular, Sugimoto only discloses an oxidation catalyst provided in the light-sensitive paste used in forming the ribs, but does not disclose that using the paste having the oxidation catalyst to form the ribs necessarily results in the oxidation catalyst being exposed to the inner space (*i.e.*, the space formed after the ribs are formed and the front and back panels are sealed together). Additionally, Sugimoto only discloses an oxidation catalyst for reducing the temperature required for burning off the binder component when forming the rib, and does not disclose that the oxidation catalyst is to be exposed to the inner space and accelerates oxidization of a hydrocarbon in the inner space, as required by claim 1.

Therefore, in addition to the fact that Sugimoto does not disclose the second catalyst required by claim 1, Sugimoto also does not disclose a first catalyst provided on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space and react with a hydrocarbon existing in the inner space, in which the first catalyst accelerates oxidization of the hydrocarbon in the inner space, as required by claim 1.

Fujitani discloses a glass paste which, as shown in Fig. 1, is used to form a dielectric layer 104 of a front panel 101. Fujitani also discloses that the glass paste includes a decomposition accelerating substance, which may include a catalyst.

However, Fujitani does not disclose a catalyst *provided on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space and react with a hydrocarbon existing in the inner space*, as required by independent claim 1. In particular, Fujitani only

discloses a catalyst provided in the glass paste which is used to form the dielectric layer, and does not disclose a first or second catalyst provided on at least one of the barrier rib and the phosphor layer, as required by independent claim 1.

Further, it is noted that Fujitani discloses that the dielectric layer 104 is covered by a protective layer 105 in order to protect the dielectric layer from any sputtering that occurs when discharges are generated between display electrodes (see Fig. 1 and paragraph [0052]). Accordingly, as the dielectric layer 104 of Fujitani is covered by the protective layer 105, no portion of the dielectric layer 104 is exposed to the inner space, and thus any catalyst contained in the dielectric layer 104 of Fujitani is also not exposed to the inner space, as required by claim 1.

Therefore, as Sugimoto only discloses a catalyst (*i.e.*, a first catalyst, as indicated by the Examiner) provided in the light-sensitive paste used in forming the ribs (and does not disclose that the catalyst in the resulting ribs necessarily is necessarily exposed to the inner space), and as Fujitani only discloses a catalyst contained in a dielectric layer which is not exposed to the inner space, the combination of Sugimoto and Fujitani does not disclose or suggest a PDP which includes a first catalyst and a second catalyst provided on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space and react with a hydrocarbon existing in the inner space, as required by independent claim 1.

Further, it is noted that MPEP § 2142 indicates that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” In this regard, it is noted that on page 3 of the Office Action, the Examiner asserts that it would have been obvious “to incorporate the material of Fujitani et al. into the PDP of Sugimoto.”

However, it is noted that claim 1 does not merely require that the PDP include the second catalyst (*i.e.*, the catalyst which Fujitani is cited as disclosing). Rather, claim 1 specifically requires that the second catalyst be provided “on at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space.” In this regard, it is respectfully submitted that the Examiner has not provided an “articulated reasoning” as to why it would have been obvious to incorporate the catalyst of Fujitani “into at least one of the barrier rib and the phosphor layer so as to be exposed to the inner space,” despite the fact that Fujitani only discloses the catalyst in a dielectric layer which is not exposed to the inner space. Rather, it is respectfully submitted that

the Examiner's assertion that it would have been obvious "to incorporate the material of Fujitani et al. into the PDP of Sugimoto" is a "mere conclusory statement" which cannot properly sustain an obviousness rejection.

Therefore, for the reasons presented above, it is believed apparent that the present invention as recited in independent claim 1 is not disclosed or suggested by the Sugimoto reference and the Fujitani reference taken either individually or in combination. Accordingly, a person having ordinary skill in the art would clearly not have modified the Sugimoto reference in view of the Fujitani reference in such a manner as to result in or otherwise render obvious the present invention of independent claim 1.

Therefore, it is respectfully submitted that independent claim 1, as well as claim 13 which depends therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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